

**Before the
Federal Communications Commission
Washington, DC 20554**

In re:

**Review of Emergency Alert System
Further Notice of Proposed Rulemaking**

EB Docket No. 04-296

COMMENTS

Active Data Exchange submits these comments in response to the Further Notice of Proposed Rulemaking (“FNPRM”) in the above-captioned matter.¹ The FNPRM requests, *inter alia*, information regarding next generation technologies to improve upon the widespread dissemination of reliable information under emergency circumstances at the federal, state and local levels.² As described below, Active Data Exchange has created a messaging administration tool that can get authoritative subscriber-based information to web sites, PDAs and text-capable handheld devices. The system is robust; it can facilitate communications on a national, state or local basis; and it can do so in multiple languages to ensure the broadest dissemination of emergency information on a timely basis. Active Data Exchange submits that web-based applications that can quickly and reliably disseminate emergency information over multiple platforms, such as the system described here, are the logical solution to the current gaps in the nation’s emergency alert system. Such solutions must be promptly adopted to protect lives and property in future emergency situations.

¹ Review of Emergency Alert System, *Further Notice of Proposed Rulemaking*, EB Docket NO. 04-296 (released November 10, 2005).

² FNPRM at ¶¶64-68, 73, 80-81.

1. Background.

This document, and the attached White Paper, describe the use of Internet Protocol (“IP”) networks as a viable alternate or adjunct channel for the distribution of important emergency and alert information in the event of a local, regional or national disaster, either man-made or natural.

The Commission has traditionally focused on current technology to support a national emergency alerting network. For more than forty years, the Commission relied on the best deployed technology for informing the public about emergency events, and what the public should do to respond. Civil Defense shelters were a key component of these plans, as was the Emergency Broadcast System (“EBS”). Traditional analog television and radio was the communications medium for the EBS, and regional television and radio stations were encouraged to participate as part of their FCC licensing.

As technology has evolved, digital broadcast has become more the standard than the exception. In the last 10 years, the evolution of direct-to-home satellite television, digital cable television, and satellite radio have garnered significant market share.³ There are now almost as many personal computers per capita as there are televisions, and more consumers are relying on information obtained from the Internet and satellite receivers

³ Sirius Radio and XM Radio Holdings (the nation’s two prominent satellite radio providers) now have over 9 million subscribers combined and an estimated over 14 million listeners daily (almost 2% of the US population). It is estimated that by 2010, XM Radio will have over 41 million subscribers, and Sirius radio projections are not that far behind. As of September 30, 2004, DIRECTV U.S. (the leading digital satellite TV provider) had approximately 13.5 million subscribers. DIRECTV U.S. currently has a fleet of eight satellites, enabling it to distribute to its customers more than 850 digital video and audio channels, including about 125 basic entertainment channels, 31 premium movie channels, over 25 regional and specialty sports networks, an aggregate of over 600 local channels, over 35 Spanish and Chinese language special interest channels, up to 55 pay-per-view movie and event choices and seven HDTV channels. EDGAR: SEC Filings of DirectTV USA.

than from analog radio and standard TV. The digital revolution is in this respect nearly complete, as we have seen the convergence of voice, data and video into mainstream America.

The OECD has developed information regarding the relative prevalence of technologies relevant to the communication and receipt of information. According to the OECD, the United States has:

- 63.7 web sites per 1000 people
- 644 personal computers per 1000 people (191 million)
- 1500 television stations
- 740 televisions per 1000 people (219 million)

Add the growth of wireless communications (cell phones, PDAs, and pagers) into the mix and we see that with 488.1 cell phones per 1000 people, the US population is more connected than ever.⁴

Given this intricate combination of digital and analog networks that touch virtually every person in the nation, why is communications of events and emergencies is so difficult? The answer is simply that authoritative messaging over a robust infrastructure is lacking. A solution to this problem is described below and in the attached White Paper.

2. Discussion.

a. General.

Active Data Exchange has created a messaging administration tool that can get authoritative subscriber-based information out to web sites, PDAs and text-capable

⁴ Source for all figures: OECD 2003

handheld devices. Using broadband or wireless IP spectra, Active Data Syndicator aggregates, classifies and delivers information to those who need to know. The published information is authenticated because it is controlled from the source. This web-based information broadcast channel can then be easily integrated into the digital head ends of satellite TV and radio, resulting in a redundant system of information dissemination both intra- and inter-agency, from Federal to local level personnel through any number of modalities.

The advantages of this approach are obvious. First, by making emergency information available via the web, the public can obtain information that they need when they need it, rather than waiting for (and possibly missing) a mass broadcast using the EBS. Second, the information distributed can be customized, so that the data available on an emergency response organization's intranet could be keyed to the needs of that organization; or the information available in one region or locality could be targeted to the situation in that area. Third, the digital distribution of information means that there no longer needs to be a language barrier. The XML-based system delivers the content whether or not it is in English, Spanish or any other non-character-based text, addressing the Commission's concerns regarding multiple language distribution of key emergency data. *See* FNPRM at ¶ 81. Not only can text be presented in any language (in fact, in multiple languages), the total content can include graphics and other non-text content that can convey information, further reducing language barriers.,

b. Emergency Preparedness:

Active Data Exchange's web-based information distribution system contributes to emergency preparedness in various ways. A well-conceived emergency response must

provide consistent, dependable information to the public from the very first moments of a natural or man-made disaster. That means the media must have access to accurate, up-to-date information that the public can safely rely upon and act on to respond to the unexpected.

America's telecommunications infrastructure is obviously important to national security. However, when there is a national emergency, phone lines, fax lines, and other communications channels may be overloaded and unavailable for use. Any prudent emergency response plan must include a combination of multiple communications channels, including Web-based communications.⁵

The Web is able to handle millions of simultaneous transmissions. Furthermore, emergency and other important content can be published to the Web from anywhere in the world with connectivity, as well as accessed from the Web anywhere in the world. Information on the Web is not limited to one geographic location, one communications channel, or one form of media.

Moreover, the physical structure of the Internet is quite robust. Even if one particular route between computers is down, the Internet will automatically search for other available routes. The connections are robust, self-healing, diverse, multi-pathed and multi-homed. However, access to "instantaneous information" in time of crisis has not been available on the Web to date, both because of the complexity of the Web and the limitations of traditional delivery methods (such as phone, fax, and e-mail). Nor have

⁵ Even if the circuit switches making up the traditional public switched telephone network are overwhelmed, the packet-switched Internet will not necessarily be significantly impaired. In part this is because DSL- and cable-based Internet access does not rely on PSTN switches to function; in part also, this is due to the fact that, like email, web pages do not require a 100% real-time connection to be downloaded. Instead, they will download as rapidly as network traffic allows.

emergency management agencies had the ability to issue an alert regarding a regional warning or an industry-specific threat through a narrowcast channel on a need-to-know basis without going through a time-consuming, labor-intensive, linear process of selectively phoning, faxing, or e-mailing.

c. An Emergency Web Broadcast System addresses core strategic goals set by the Department of Homeland Security.

The Department of Homeland Security has identified certain key goals relevant to that department's mission. Active Data Exchange's Web Broadcast System has been designed to address these core strategic goals. The Commission should consider these goals in assessing future steps with respect to next-generation emergency alerting systems..

Awareness: Identify and understand threats, assess vulnerabilities, determine potential impacts and disseminate timely information to our homeland security partners and the American public.

- ✓ Web broadcasting will enable communications to a much broader audience than can be reached by phone, fax or e-mail. While e-mail can be a very effective one-to-one communication tool, Web broadcasting expands the "reach" of emergency public communication exponentially. The greater the exposure of emergency response messages to educate the public or groups of agencies about a particular topic, the greater the likelihood that awareness is increased and lives are ultimately saved.

Prevention: Detect, deter, and mitigate threats to our homeland.

- ✓ Educating the public and disseminating information is a key component of deterring and preventing attacks to our national security.

Protection: Safeguard our people and their freedoms, critical infrastructure, property and the economy of our Nation from acts of terrorism, natural disasters, or other emergencies.

- ✓ In the event of a suspected threat or attack, the Web can provide instantaneous communication to millions of visitors at a time. Use of Web sites to complement radio, television, e-mail, fax and wireless communications is a logical step to distributing critical information that will allow people to respond appropriately during an emergency to protect themselves, their families, and their property.

Response: Lead, manage, and coordinate the national response to acts of terrorism, natural disasters, or other emergencies.

- ✓ Information can be distributed that is specific to a neighborhood or a region impacted by an attack or a disaster. Neighborhood and local information is the most difficult to find, since news broadcasts cover national or regional areas. By identifying local Web sites, national media can direct visitors to specific shelters or to designated, emergency traffic routes instantaneously.
- ✓ Web broadcasting and news feeds are not new concepts. News distributors such as AP, PRNewswire, and Bloomberg have provided information feeds for decades. However, the systems they use are proprietary and custom-built for their own purposes. With the Active Data Exchange solution, the infrastructure is now in place to aggregate and distribute information on a mass scale.

3. Conclusion.

The Commission should expressly recognize the Internet as a viable supplemental medium for the dissemination of alerting messaging to governmental agencies and the general public. The Commission should expand its focus to include current technologies and to prescribe, in the name of health and safety, regulations that embody IP-based emergency alerting as one method to provide citizens the necessary information prior to, during and after an emergency.


In addition to its other benefits, Active Data Exchange's proposal, and systems similar to it, address the problems encountered when attempting to alert non-English speaking citizens, and encompass the an emergency alerting structure which embraces the

Internet, allows for significant cross platform integration and extensibility, providing years of usability and reliability.

Respectfully submitted,

ACTIVE DATA EXCHANGE, INC.

By:

A handwritten signature in dark ink, consisting of a large, stylized 'J' followed by a long, horizontal, slightly wavy line that tapers off to the right.

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January 24, 2006

Attachment: White Paper

An Emergency Web Broadcasting Network For The Department of Homeland Security

A White Paper

January 24, 2006

Submitted by:
Susan Yee and Dr. Richard Martin

I. Background

“Everything we’ve seen in our research suggests that ***Americans want every channel of communication fired up when there are emergencies,***” says Lee Rainie, director of the Pew Internet and American Life Project.

“They want horns sounding, radios blaring, TV screens alight with the latest information, pagers buzzing, e-mails sent, and Web pages updated on the fly. ***They don’t want to have to rely on just one communications method and they don’t want one channel to have special privileges over others.*** They want each one of them used when all hell is breaking loose.”

Source: Pew Internet and American Life Project –
Survey with Federal Computer Week magazine
about emergencies and the Internet
August 31, 2003

During the first chaotic minutes of an emergency, when it truly seems like “all hell is breaking loose,” communication is key to the success of any planned emergency response. With lives, infrastructure, and resources at stake, the delivery of accurate, up-to-date information is as important to crisis management as the delivery of food and medicine. Lack of information precipitates a “cascading effect” of fatal confusion. Erroneous information distributed to the public through the media promotes—instead of prevents—exponential panic and widespread chaos.

A well-conceived emergency response must plan to provide consistent, dependable information to the public from the very first moments of a natural or man-made disaster. That means the media must have access to accurate, up-to-date information that the public can safely rely upon and act on to respond to the unexpected.

America's telecommunications infrastructure is obviously important to national security. However, when there is a national emergency, phone lines, fax lines, and other communications channels may be overloaded and unavailable for use. Any prudent emergency response plan must include a combination of multiple communications channels, **including Web-based communications**.

The Web is able to handle millions of simultaneous transmissions at any one time. Furthermore, DHS content can be published **to the Web** from anywhere in the world, as well as accessed **from the Web** anywhere in the world. Information on the Web is not limited to one geographic location, one communications channel, or one form of media.

Furthermore, the physical structure of the Internet is quite robust. After all, the Internet has the ability to be used by the Department of Defense to "take a licking and keep on ticking" in the aftermath of a nuclear attack! However, access to "instantaneous information" in time of crisis has not been available on the Web to date because of both the complexity of the Web and the limitations of traditional delivery methods (such as phone, fax, and e-mail). Nor have emergency management agencies had the ability to issue an alert regarding a regional warning or an industry-specific threat through a narrowcast channel on a need-to-know basis without going through a time-consuming, labor-intensive process of selectively phoning, faxing, or e-mailing.

An Emergency Web Broadcast System offers the following advantages to enhance the Commonwealth's existing emergency response plan:

- ✓ Complements existing telephone, facsimile, and e-mail emergency response efforts;
- ✓ Controls the exact, "official" language and information that needs to be communicated, without allowing that information to be filtered through another communications channel or "diluted" by someone further along the

emergency response chain who does not have access to complete, up-to-date information;

- ✓ Provides the ability to gather emergency response information from multiple sources around the country (and around the world) as a decentralized agency network, while reliably broadcasting that same information to the media and the general population under extreme conditions in “real time”;
- ✓ Allows emergency response agencies to categorize, prioritize, and distribute information from a centralized repository, with the ability to group communications intended for state or local police, state or local emergency management agencies, statewide or local media, and for both broadly defined and narrowly targeted geographic regions;
- ✓ Presents critical information instantaneously within thousands of destination sites that automatically updates as new information becomes available;
- ✓ Prohibits unauthorized use of emergency Web-broadcast information so that only those sites that are pre-authorized by the Department of Homeland Security (DHS), the Federal Emergency Management Agency (FEMA) or state-level emergency management offices are allowed to receive and re-broadcast that information.

Strategic Goals

An Emergency Web Broadcast System addresses core strategic goals set by the Department of Homeland Security:

Awareness: Identify and understand threats, assess vulnerabilities, determine potential impacts and disseminate timely information to our homeland security partners and the American public.

- ✓ Web broadcasting will enable the Department of Homeland Security to communicate to a much broader audience than can be reached by phone, fax or e-mail. While e-mail can be a very effective one-to-one communication tool, Web broadcasting

expands the “reach” of emergency public communication exponentially. The greater the exposure of emergency response messages to educate the public or groups of agencies about a particular topic, the greater the likelihood that awareness is increased and lives are ultimately saved. Similarly, the more Web site “real estate” that the Federal Government obtains to broadcast emergency public communications, the more the citizenry will be exposed to the communication.

Prevention: Detect, deter, and mitigate threats to our homeland.

- ✓ Educating the public and disseminating information is a key component of deterring and preventing attacks to our national security.

Protection: Safeguard our people and their freedoms, critical infrastructure, property and the economy of our Nation from acts of terrorism, natural disasters, or other emergencies.

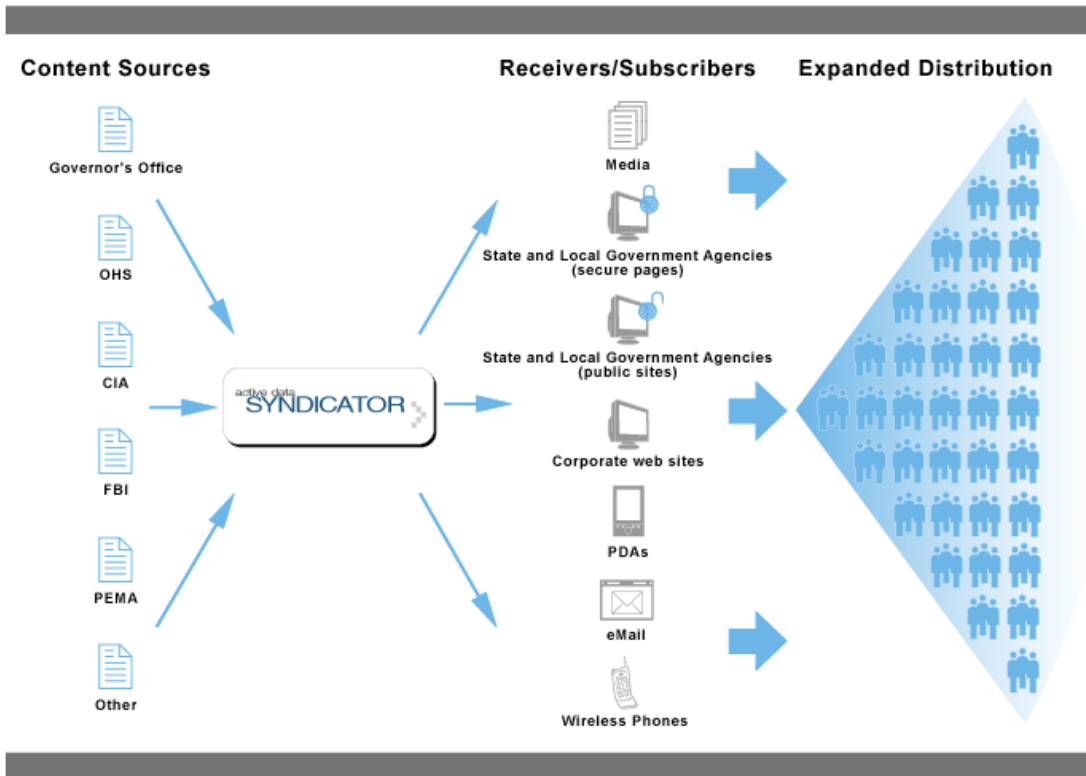
- ✓ In the event of a suspected threat or attack, the Web can provide instantaneous communication to millions of visitors at a time. Use of Web sites to complement radio, television, e-mail, fax and wireless communications is a logical step to distributing critical information that will allow people to respond appropriately during an emergency to protect themselves, their families, and their property.

Response: Lead, manage, and coordinate the national response to acts of terrorism, natural disasters, or other emergencies.

- ✓ Information can be distributed that is specific to a neighborhood or a region impacted by an attack or a disaster. Neighborhood and local information is the most difficult to find, since news broadcasts cover national or regional areas. By identifying local Web sites, national media can direct visitors to specific shelters or to designated, emergency traffic routes instantaneously.

Web broadcasting and news feeds are not new concepts. News distributors such as AP, PRNewswire, and Bloomberg have provided information feeds for decades. However, the systems they use are proprietary and custom-built for their own purposes. With the Active Data Exchange solution, the infrastructure is now in place to aggregate and distribute information on a mass scale.

II. Solution Overview

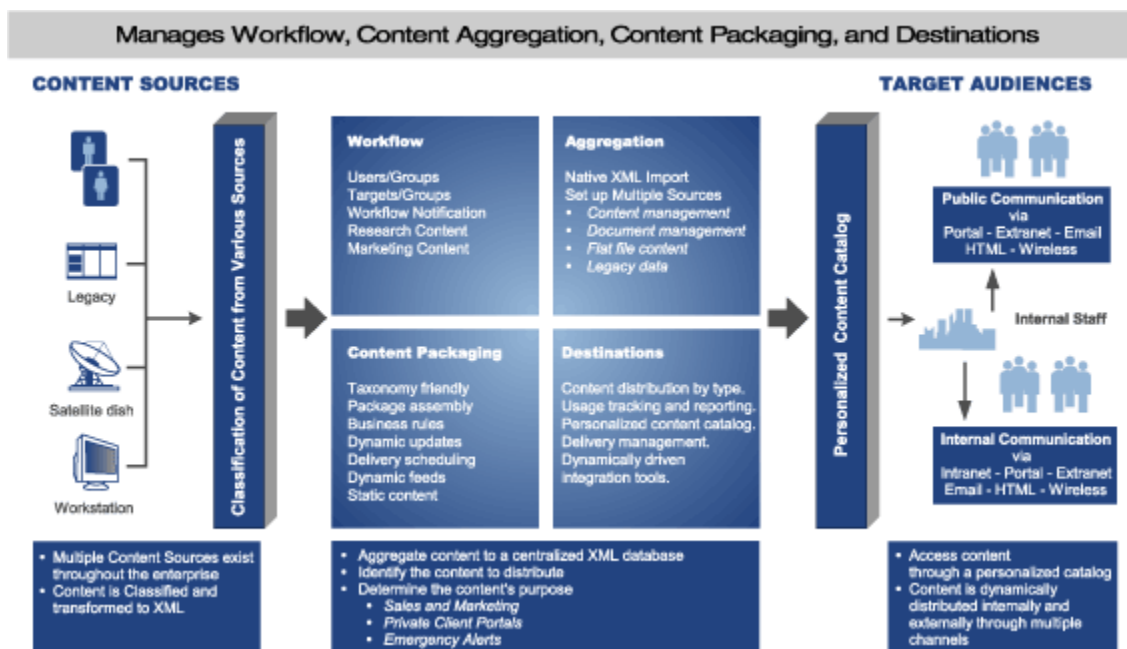


With Active Data Syndicator, the Department of Homeland Security has the ability to provide emergency alerts to different Web sites across the country or the world. Communications channels can include large portals, specialized targeted Web sites, e-mail, wireless phones and PDA's, or fax numbers. Active Data Syndicator was designed to provide an information delivery management system that uses the Internet to communicate between the disparate external and internal networks that exist. This approach to multi-path communication technology sets us apart from other solutions in several ways:

- Fast, easy, and scalable receiver setup.
- Ongoing maintenance is minimal.
- Separation of editorial workflow from distribution workflow.
- The ability to offer content that is not editable.
- No software is required for receivers to receive feeds.
- Tools are browser-based.

Active Data Syndicator includes a built-in workflow process that allows different administrators to package the content to be distributed and to determine the destinations of the content. Content selection is managed separately from distribution. As in any communications office, the person creating the press announcement may be different than the person deciding which organizations should get it. Active Data Syndicator's workflow allows the Federal Government to ensure that content is accurate, while also controlling where that content is distributed. Content can be targeted to media only, to local municipalities, or to the password-protected areas of certain agencies.

The diagram below shows the flow of content to destinations based on a centralized management system.



Active Data Syndicator provides the following advantages:

- Permission and privilege-based workflow that allows separation of the work processes of the communications staff and operational staff.
- Receiver profile management with personalized receiver menus.

- Ability to syndicate content to internal and external digital destinations seamlessly.
- Multiple delivery channels.
- Open-based platform across disparate networks.
- No software required to be installed by the receiver for content delivery.
- Integration of industry standards such as ICE, PRISM, SOAP, and other XML-based Protocols.
- Scalable infrastructure.

The particular challenge in meeting the complex needs of DHS is not the intricacy of any particular delivery channel or syndication business rule, but the vast array and combination of content, syndication rules, delivery methods, and receiver environments. With a centralized information distribution platform, Web site updates, e-mail messages, cell phone messages, faxes, and other delivery methods can be managed in a more efficient and timely manner.

The following table provides examples of types of content and packaging, delivery and target destinations.

Content Sources	Content Packaging
<ul style="list-style-type: none"> • Data Feeds • Internal Users • First Responders • Government Agencies • Weather 	<p>Audience Specific or Functional</p> <ul style="list-style-type: none"> • Military-based • Healthcare-based • Emergency-based • By type of chemical • By type of attack
Content Delivery Channels	Destinations/Receivers
<ul style="list-style-type: none"> • Fax • E-mail • Public Web Sites • Private Portals and Intranets • Wireless 	<ul style="list-style-type: none"> • Federal, State and Local Government Agencies • Emergency Personnel (First Responders) • Healthcare Institutions • Media • Corporate Intranets • Law Enforcement Agencies • Other

Content Delivery Methods

Different organizations will most likely require different methods of receiving OHS information. Active Data Syndicator provides flexible delivery methods to address the diverse technical environments that exist across the Web.

Active Data Protocol (ADP)

This delivery method is exclusive to Active Data Syndicator™ and allows DHS to have a leadership position in emergency response and public communications. Receivers could receive content updates on-demand and in real-time with Active Data Exchange's proprietary method. In a simple one-time, cut-and-paste operation, Active Data Protocol code (JavaScript) is inserted into a Receiver's HTML or Content Management System. The JavaScript is inserted on the pages where the receivers wish to display the content

feeds. Each time the page is refreshed, the Active Data Protocol code triggers a fresh data call to the Content Source and retrieves the latest content.

Active Data Protocol ensures that only valid receivers have access to Pennsylvania's content. With Active Data Protocol, Pennsylvania can build and manage style guides that will control the format and presentation of products for particular receivers or receiver groups.

process



AUTOMATIC UPDATE AREA



WEBSITE



EMAIL



PDA

Content Retrieval through XML

Receivers can retrieve either formatted HTML or XML Documents (conforming to the Active Data DTD) from an automatically generated URL to receive emergency Web broadcast content. Receivers retain the flexibility to map the content directly into a Content Management System or to a Web page.

E-mail, Fax, and Other Delivery Methods

Additional methods can be integrated based on the Nation's existing infrastructure. Through the use of XML transforms, content can be handed off to other communications channels.

III. Specific Uses

The initial implementation of a communications plan would include identifying those Web sites that can be accessed by the public and media for information about any homeland security-related information as it relates to a terrorist attack and, more specifically, how it relates to specific regions. The benefit of using the Web to broadcast this information is realized in the cost savings that will accrue when making changes to content, as compared to the time delay and cost of using print, phone, or fax.

- An Emergency Web Broadcasting System is important to rapidly distribute critical information in “real time” to media Web sites during an emergency and for the benefit of the general public.
- This system can also be used by the White house, any state Governor’s office, FEMA, and the Department of Homeland Security to provide updated, comprehensive information to local municipalities and to the public.
- Information can be broadcast to public or private sites, such as intranets and password-protected areas.
- Other uses include distributing information to Industry Sector Groups such as utilities, local governments, etc., to communicate elevated threat levels or to increase surveillance of critical locations (e.g., financial institutions, nuclear power plants) in response to site-specific threats.
- The system will allow the Federal Government to broadcast Homeland Security advisory levels to as many Web sites as possible and accelerate public communication and preparedness.
- Feeds could be retrieved from multiple sources and redistributed centrally and seamlessly to media and Governmental/informational Web sites across the nation.

Media Applications

DHS may offer media firms several types of feeds for their use.

- 1) Emergency Notification Feed
 - a. No content would appear under normal circumstances. However, in the event of a disaster or emergency, DHS would have the ability to broadcast

an important message to the public and have it appear on all participating Web sites.

- 2) Threat Level Advisory Feed
 - a. Current threat levels can be broadcast to all participating sites and updated automatically when the threat level changes.
- 3) Prevention Feed
 - a. General prevention and awareness information can be provided on a regular basis and placed within the media site so that comprehensive information is available through the media.

Media firms can promote their participation in the government's Emergency Web Broadcasting System as a "public service" that also serves to increase the number of page views to their own sites.

Inter-Agency Use

DHS can share information across agency Web sites using the Emergency Web Broadcast System. Critical information, such as available emergency rooms, open shelters, wind direction, treatment options, or evacuation instructions can be broadcast to all relevant agencies and personnel that depend on such information in order to respond appropriately. Sample feeds may include:

- 1) Threat Level Advisory Feeds
 - a. Automatic updates of the current threat level would be available to each agency's public and portal sites.
- 2) DHS Grant Opportunities Feed
 - a. The latest grant opportunities can be broadcast to police, fire, and emergency medical services portals.
- 3) Bio-terrorism Attack Feed
 - a. Information required in the event of a bio-terrorism attack.
- 4) Vigilance and Awareness Feeds
 - a. Information required to spot suspicious activity.
- 5) Natural Disaster Management

Benefits

The Federal Government is well positioned to broadcast official emergency response communications across the Web during a natural or man-made disaster. With the capability of providing emergency response information online, DHS and FEMA will provide an additional measure of safety via an additional channel for communicating with media, first-responders, and the public. An Emergency Web Broadcasting System will give those that need to know a content-controlled, channel-directed, tamper-proof, UN-FILTERED, communications channel and one more valuable, flexible tool in the Nation's emergency response tool box.

Immediate Updates Across Multiple Web Sites

Distributing critical information in the timeliest way possible will literally determine the success or failure of a planned emergency response. The time required for Web pages to be updated manually is eliminated with an automated Web broadcasting system. Whether it is public information, or even non-public information that requires authorization feeds to Web sites that require IDs and passwords, information is efficiently updated simultaneously.

Improved Communications Network

Through the use of Web broadcasting to media outlets, other agencies, local municipality Web sites, healthcare facilities, federal agencies and even corporate sites, localities would, essentially, have a regional or national (depending upon the scope of the emergency) *information network in place* that extends far beyond its own Web sites. Even within its own vast network of government Web sites, the flexibility for site administrators to subscribe to critical or non-critical feeds of information will be a major milestone in sharing information. Less time is required to update information on a Web-site-by-Web-site basis and incorrect information can be removed quickly from the source so that erroneous information is just as quickly removed on unmanaged Web sites.

Automatically Updating as new reports are available.



Reduce Unnecessary Traffic to 911 Systems

The use of Web broadcasting for critical information will reduce the traffic to already over-worked 911 emergency call centers and increase the speed of information that can be distributed directly to the public. For many municipalities, local health bureaus have limited staff to disseminate treatment or shelter information. The amount of time required distributing information to 911 operators, emergency personnel, and local officials could take hours in the aftermath of an emergency. Calls made immediately to 911 after an incident could get incorrect information or—even worse—no information on what to do. With the Web, the public can be directed to participating Web sites for geographic or relevant information for answers to Frequently Asked Questions to alleviate redundant questions to 911 operators.

Complement to E-Mail

Like water flowing out of a hose, e-mail has the potential to fill our inboxes and workdays, overwhelming our abilities to navigate through the growing currents of content. While e-mail alerts are an effective means for immediate information, when

used to distribute information resources, it can be cumbersome as a receiver sifts through their un-filed e-mails to search for information that may have been sent months earlier. E-mail is better used to alert receivers that complete information can be found on particular Web sites. Web site information can be much more comprehensive and flexible to the extent that the visitor is able to seek answers to their own questions and receive accurate, complete answers that do not conflict with competing e-mails.

Inter-Agency Efficiencies

When bottlenecking occurs during an emergency, blame for any mishaps usually occurs after the dust has settled and an analysis of failure points takes place. Time sensitive information that is not delivered has been the cause for unnecessary casualties. An Emergency Broadcasting System within secure Web sites provides whole departments that “need to know” with immediate access to federal or statewide information that can be valuable to do their jobs. Rather than the “whisper down the alley” method of information distribution, DHS has the capability to do a targeted broadcast of information to selected Web sites based on their relevancy to the disaster. As the Web becomes more established as the source of immediate information, more key users will benefit from a Web broadcast message.

V. About Active Data Exchange

Active Data Exchange is a minority and woman-owned technology firm based in Pennsylvania that provides consulting, technologies, and implementation services in the area of information distribution solutions. Working as a partner with the Department of Homeland Security and FEMA, we at Active Data Exchange are committed to providing innovative and effective solutions to the complex challenges that face us in the aftermath of September 11th and the recent hurricane hitting the gulf states.

Our clients include Sun Microsystems, Warner Music Group, Adobe Software, CMP Media, Turner Construction, Penn Mutual Life Insurance, SEPTA (Southeastern PA Transit Authority), and the State of Florida.

Industry Standards Participation

Information and Content Exchange

Active Data Exchange participates as an Active Member of the Authoring Group for the ICE Protocol. Its CTO serves as the Chairman of the ICE 2 Specifications Committee for the ICE Authoring Group. The ICE Authoring Group develops, publishes, maintains, and promotes the ICE specification, leading to a whole new class of Web-based XML Protocols for business opportunities and applications such as syndicated publishing networks, online reseller networks, and global knowledge management systems. The ICE standard, an initiative hosted by IDEAlliance, reduces the cost of doing business online and increases the value of B2B relationships. Members include Boeing, Microsoft, Oracle, Warner Music Group, Tribune Media, Vignette.

W3C (The World Wide Web Consortium)

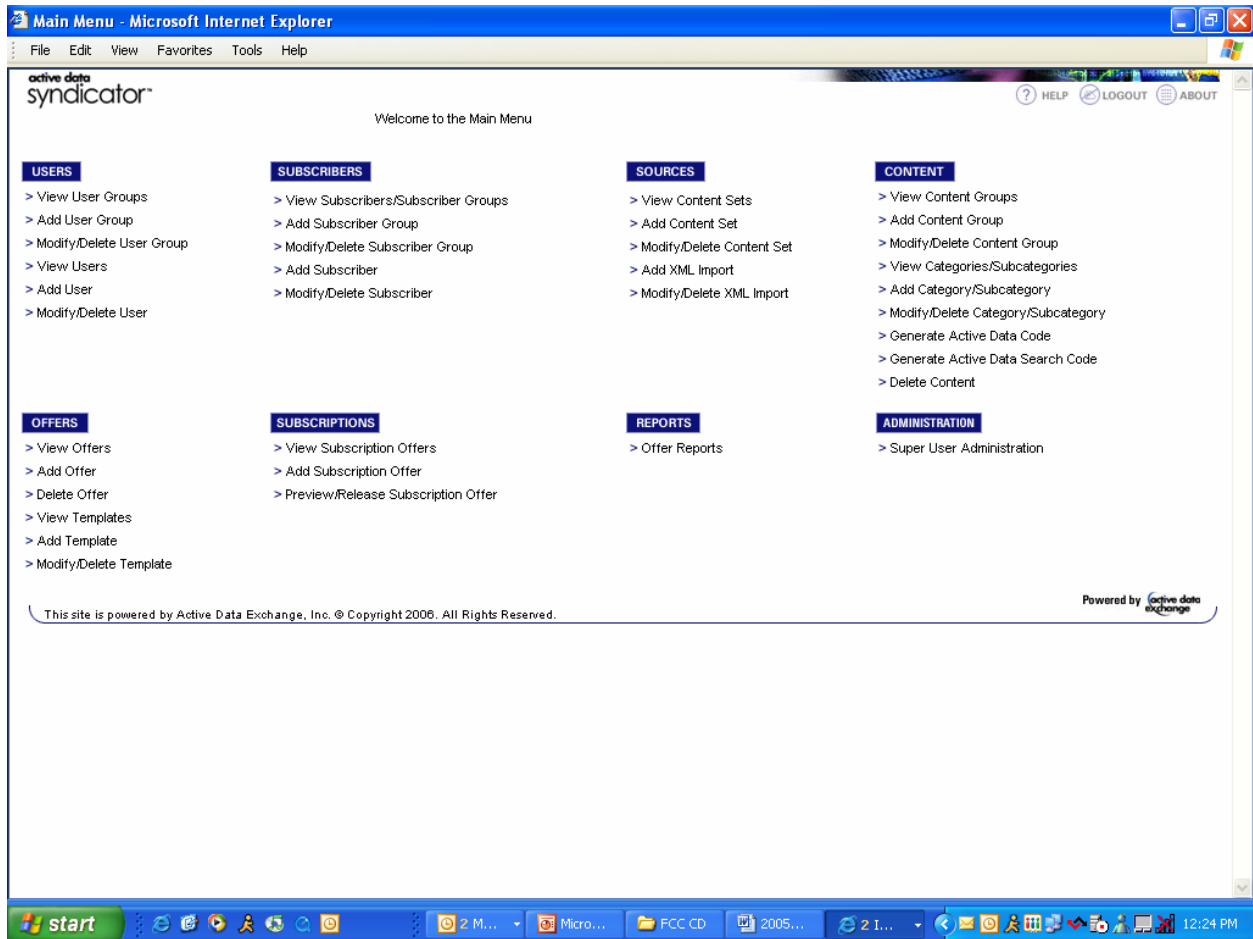
Active Data Exchange participates at two levels on the W3C: As an Active Member of the recently formed XML Protocol Working Group, and as a member of the XML Activities group. The [World Wide Web Consortium](#) was created in October 1994 to lead the World Wide Web to its full potential by developing common protocols that promote

its evolution and ensure its interoperability. W3C has more than 400 [Member organizations](#) from around the world and has earned international recognition for its contributions to the growth of the Web. To meet the growing expectations of users and the increasing power of machines, W3C is already laying the foundations for the next generation of the Web. W3C's technologies will help make the Web a robust, scalable, and adaptive infrastructure for a world of information.

PRISM (Publishing Standards for Industry Standard Metadata)

The objective of the PRISM Metadata Standards group is to create a standard vocabulary that allows more efficient content categorization and content retrieval. PRISM is an extensible XML metadata standard for syndicating, aggregating, post-processing, and multi-purposing content from magazines, news, catalogs, books, and mainstream journals.

VI. Active Data Syndicator Functions



Active Data Syndicator includes seven standard main functionality areas. The software employs recognizable and easy-to-understand user interfaces that focus on the use of step-by-step wizards, group and individual notifications based on actions performed. Both the Syndicator and Subscriber menus are completely browser-based.

Workflow and User Management

An important element of the syndication technology is to provide workflow tracking that adequately safeguards day-to-day administration, and tracks internal processes for quality control. Active Data Syndicator™ allows Syndication Administrators to set-up users with specific privileges -- the ability to perform specific syndication-related actions

by a user class. These privileges can be further refined – either narrowed or expanded – according to permissions based on particular content attributes and classifications. The Active Data Syndicator™ workflow features also allow users to schedule regular review processes for content and content packages prior to their release.

Of particular importance to content-driven processes, Active Data Syndicator provides the ability to define editorial workflow separate from the communications workflow. For example, the system could be configured so that content editors would be the only users allowed to create specific content packages, but have no rights to offer the content to different receivers. At the same time, certain communications users could only have rights to manage receivers and not content. The system is extremely configurable to accommodate various levels of workflow and can easily integrate into the proposed workflow management system.

DHS can act as a communications traffic controller, by allowing FEMA to package their own content with their own administrative privileges, but not allowing FEMA to access any content from the Governor's Office. **FEMA, DHS, the affected state's Governor's Office or the White House can setup their own content feeds, while the DHS would control who can have access to which feeds.**

Receiver Management

The heart of Active Data Syndicator is the ability to track and serve DHS's government and non-government receivers. Active Data Syndicator™ comes out-of-the-box with a sophisticated and customizable Receiver (Subscriber) Management function. A "Subscriber" is described as an receiving organization that takes syndicated content from any delivery channel. Active Data Syndicator™ software Users (with the appropriate privileges and permissions) can add, modify, delete and track Receivers and Receiver (Subscriber) Groups.

Subscriber Groups can be setup as multiple receivers who subscribe to identical content feeds with similar syndication business rules and delivery channels. Active

Data Syndicator™ also provides quick and easy functionality to change Subscriber parameters and relationship values.

Content Source Manager

Active Data Syndicator™ is a standards-based software system with a built-in content repository for easy normalization and storage of content from various systems, file directories and other storage locations. Active Data Syndicator™ would provide the flexibility to actively retrieve and syndicate from a file's current location or, import content from various source locations and normalize content into one common syndication repository that is core to Active Data Syndicator™.

Often, content from different sources is not formatted the same way. An external process is required to normalize the content from multiple sources so that the Content Source Manager can store content in a way so that DHS can select categories of information or individual items/articles to be distributed.

Item (Asset) Management and Packaging

Active Data Exchange uses the term "Item" to refer to a single piece of content – a unique digital asset. Active Data Exchange describes a collection of "Items" as a "Package."

Active Data Syndicator™ has a simple and flexible User interface to assemble individual articles or feeds into Packages for distribution to Receivers/Subscribers. Standard, out-of-the-box Active Data Syndicator™ functionality allows DHS to establish syndication business rules, schedule delivery of Packages, assign delivery methods to Packages, and attach digital rights information to Packages.

Active Data Syndicator provides matrix management functionality of content. Content can be assigned to different Content Groups, Categories, Sub-Categories, and Content Packages/Feeds. Each Content Feed can consist of any variation of content configured

by DHS. Additionally, each Content Feed can be offered to and delivered to any combination of one or more receivers.

Subscription Tracking, Auditing and Reporting

DHS cannot afford to lose track of its individually tailored content syndication agreements and terms with individual Receivers. Active Data Syndicator™ includes Subscriber Tracking and Reporting of content feeds used and accepted. Active Data Syndicator™ offers several search and sort capabilities to easily view and track the feeds provided to particular Subscribers.

The software allows Users to generate reports on Subscriber activity. Standard reports include the ability to track data by Subscriber or by activities and actions within a specified time period. In conjunction with tracking Subscribers, users have the ability to track the receipt and review of digital subscriptions. When a Subscription offer is formally made to a receiver – the process when Active Data Protocol code or XML is generated – Active Data Syndicator™ tracks the Subscribers review and acceptance of the “offer.” This module also provides a means to ensure the successful delivery and use of a syndication offer, to initiate the re-sending of a syndication offer that is inadvertently deleted or rejected, and to receive messages from Subscribers regarding rejection, modification, or cancellation of a Subscription. Standard reports from Active Data Syndicator™ provide a breakdown of specific success rates regarding any particular subscription product offering.

Personalized Subscriber Menu

An exclusive feature of Active Data Syndicator™ is a complete browser-based management console, automatically generated and customized for each Receiver. Receivers receive their own unique login accounts and can access their console from a Web browser with their own Custom Content Catalog. This menu provides a catalog of available content from DHS, and the ability to pick and choose individual articles for use on the Receiver’s Web site.

VII. Summary

While no one can predict when, where, or in what form the next terror attack or natural disaster will materialize, the Government must continue to prepare its emergency response to address those needs that we do know for certain will exist at the time of a terror attack:

- The need for up-to-date accurate information from DHS and FEMA.
- The need to broadcast this information as widely as possible.
- The need to control the process of distributing this information so that the right information is provided to the right persons at the right time.
- The need to coordinate emergency response plans locally, regionally, and statewide effectively and efficiently by using all available channels to reach first responders, the media, and the public at large.

The Department of Homeland Security has made communications interoperability a priority, knowing full well that communication breakdowns have plagued public safety agencies for decades. Here in the United States, the right technology and the right leadership can give first responders and public safety agencies an enhanced ability to communicate in time of crisis, in real time, when needed and as authorized.

The ability for the nation to extend its Web communications capability for public safety communication is a major step towards improving our nation's security. The implementation of an Emergency Web Broadcasting System is an indispensable tool for DHS efforts that will benefit all Americans.